### Brazos Greenways Council

Fact Sheet No. 4

# floods, floodplains and folks

4 National Park Service -- Rivers Trails and Conservation Assistance Program Publication, 1996



"The nation is now moving into a new phase of watershed management in which the task is optimal adjustment to flood hazard along with integrated use of land for water quality, wildlife, crop production, recreation, and other urban uses" -- Gilbert White

Communities all across the United States are reconsidering traditional practices and are seeking innovative solutions to reduce flood losses. It is a new "era" of community based flood loss reduction. Each of the examples below describes a multi-objective stream planning process where communities chose the creation of greenways as the primary method to mitigate flooding hazards.

# Colorado Riverfront, Grand Junction, Colorado

#### Goals

The Colorado Riverfront project is a multi-disciplinary development plan in which the design strategy focuses on flood reduction, hazardous material removal, scenic access and restoration of natural habitats. The project goals are to improve the image of the city entrances, develop a high quality industrial park to stimulate economic development and encourage the clean up and use of the Colorado River.

#### Milestones

- Licensing by the Lake county Forest Preserve District to conduct research on its land with the agreement that the district will maintain created wetlands.
- Construction of eight experimental wetland areas resulting in substantial changes to the landscape vegetation, wildlife and including and increased population of shore birds.
- Visibility of the river once obscured by a wall of weedy vegetation through a rehabilitated oak grove and wetland-dependent flora
- Ground water recharge and increased base flow.
- Inhabitation and use of the site by three state designated bird species and 36 different fish species up from only 20 species before the restoration work.

# Dungeness River Greenway, Washington

#### Goals

Multi-objective goals of flood reduction, pollution prevention and correction, fish and wildlife habitat restoration, and water conservation are being achieved through education, landowner outreach, technical assistance and restoration. These efforts are being manifested through a variety of venues, each building the other, coordinated through a network of partnerships with common, watershed-based goals.

#### **Milestones**

• With a grant from the Washington State Department of Natural resources, Clallam county employment of five displaced timber workers to stabilize over 3,000 feet of river bank using vegetation, logs, geotextile fabric and willow stakes. One and half miles of

stream have also been rehabilitated including pool and riffle construction, bioengineered banks, re-establishing meanders and placement of large woody debris.

• Publication of the Dungeness River Information and Action Guide, a 35 page booklet introducing land owners to some basic tools, techniques and sources of assistance for greenway corridors.

## Lackawanna River Greenway, Pennsylvania

#### Goals

The primary goal is the creation of a greenway plan that addresses water resource and environmental problems and the development of a linear corridor linking various historical, cultural, natural, and economic resources along the river and through its watershed

#### Milestones

- Publication of the Lackawanna Citizens Master Plan, which offered over 200 recommendations on restoring and managing the resources of the Lackawanna River.
- EPA funding award directed towards combined sewer overflow and mine drainage remediation projects.
- Grants received to acquire and develop rails-to-trails projects on abandoned rail lines, creating 26 miles of trails.

# Trinity River Common Vision Program, Texas

#### Goals

The development of a plan to reduce the potential for flood damage, improve water quality, enhance the environment, and provide recreation opportunities through out the Upper Trinity River Corridor.

#### **Milestones**

- Completion of a detailed mapping project of the corridor and development of computer floodplain models
- Adoption of the Corridor Development Certificate Process, a flood risk stabilization policy for the corridor that includes no loss of valley storage in the 100-year floodplain, a maximum allowable valley storage loss in the Standard Project floodplain of five percent, maximum allowable velocities, no allowable loss in conveyance, requirements for erosion and sediment controls and a "peer pressure" system of regional compliance.

River and Stream corridor projects that take a multi-objective approach to management like the case studies mentioned above, not only achieve the intended flood loss reduction and flow control, but they provide even greater community enhancement through:

- Natural Hazard Mitigation
- Recreation
- Streambank Stabilization
- Restoration
- Fisheries Improvement

- Wetland Enhancement
- Habitat Improvement
- Cultural Resource Enhancement
- Economic Revitalization
- Environmental Education

and these multi-objective projects are also more likely to form lasting partnerships within the community!

For more information:

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